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ABORIGINAL FAMILIES' DEMOGRAPHIC AND FAMILY CHARACTERISTICS AS PREDICTORS OF PARTICIPATION IN EARLY INTERVENTION PROGRAMS

BY
KRYSTA A. WATT

A Thesis Submitted to the Faculty of Graduate Studies and Research in Partial Fulfilment of the Requirements for the Degree of MASTER OF SCIENCE
in
Speech and Language Pathology

DEPARTMENT OF SPEECH PATHOLOGY AND AUDIOLOGY

EDMONTON, ALBERTA
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UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled, **Aboriginal Families' Demographic and Family Characterisitics as Predictors of Participation in Early Intervention Programs**, submitted by Krysta A. Watt in partial fulfillment of the requirements for the degree of Master of Science.

Dr. Gary Holdgrafer, Supervisor

Dr. Paul Hagler

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Date: Oct. 14, 1993

ABSTRACT

Researchers have found that a variety of family and demographic characteristics can influence the behaviour of parents of young children. The effect of these characteristics on a parent's ability to participate in programs has been explored but there is a lack of research dealing specifically with aboriginal families. The purpose of this study was to determine the strength of relationships among a variety of family and demographic variables to predict the criterion measures of parent participation.

Twenty aboriginal parents whose children were involved in the Children North and Wecihik Awasisak Early Childhood Intervention Programs participated in the study. The parents were interviewed to obtain information regarding eleven different demographic and family characteristics. Published and clinician-generated or adapted scales/questionnaires were utilized to obtain the family variable information. Demographic information was obtained from the parent interview and from the families' early intervention files.

Six different criterion measures of parent participation were obtained. The most basic measure was a simple count of sessions attended. Two additional measures were generated by the parents and the three remaining measures were generated by three early interventionists involved with the families. These additional measures looked at actual and preferred involvement of the parents and the level to which parents became involved in their childrens' early intervention program.

Thus, a total of six stepwise multiple regressions were computed. Correlations were also computed among all the predictor and/or criterion variables. The small

sample size and relatively low correlations between individual predictor and criterion variables contributed to an overall lack of predictability of parent participation from the multiple regression. Significant correlations found between variables were reported. Extraneous variables which may have impacted the results are reviewed and limitations of the study and implications for future research are discussed.

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CHAPTER 1

Introduction

Home based early childhood intervention programs (ECIPs) currently operating in northern Saskatchewan experience varying levels of participation from the aboriginal families they serve. The purpose of these programs "...is to provide a home based intervention program for families with children, birth to five years of age, who are developmentally delayed or at risk for delay..." (ECIP Provincial Council, 1985). Parents are viewed as an integral component of these programs and are encouraged to be involved not only in the home program but also in the development of policies and the planning and administration of the service itself.

Speech and language pathology services for clients involved in these programs are mediated primarily through the early intervention home teacher (early interventionist). As the majority of the early intervention clients have speech and language delays, the need for the speech and language pathologist to address these issues is evident. McDade and Simpson (1986) indicated there is a need to view the parent, not the child, as the client and cautioned that "...speech-language pathologists must cease functioning under the erroneous assumption that they, exclusively, are capable of providing all the stimulation that is needed..." (p. 205). The speech pathologist must explore ways of facilitating parent involvement in programming.

The emphasis on parental involvement is reflected in the ECIPs goals which stress the need to include parents in the identification and implementation of goals, education and training, coordination of services, and the development of community

support networks. One of the identified goals of the early intervention program is to develop supportive networks and to evaluate those social supports already available to parents. Improved parenting styles have been reported in those families with more available supports (Colletta, 1981; Crnic, Greenberg, Ragozin, Robinson, & Basham, 1983; Pascoe & Earp, 1984). Children were also found to be positively influenced by their families social supports (Boyce, 1985; Dunst, Trivette, & Cross, 1986). Dunst, Trivette and Deal (1988) reported that the number of social supports as well as the number of identified needs are two factors which influence parent behaviour. In addition, Dunst (1986) found that the level of a parent's commitment to prescribed interventions was significantly related to adequacy of available resources and social supports.

Ayoub and Jacewitz (1982) included "biological" criteria such as emotional/social isolation and drug/alcohol addiction, "social" criteria such as unemployment and mobility, and "interactional" criterion such as "discord or lack of support" when defining families at risk for parenting problems (p. 355). Demographic information has also been used to describe and explore family differences (Tonge, James, & Hillam, 1975). Exploration of demographic and family variables such as: socio-economic status, age of the parent, health status of the family, severity of the identified child's handicap, the strength of the family's cultural identity and stability and composition of the household may help to identify additional factors which affect an aboriginal parent's participation in early intervention programs.

There is a lack of research dealing with aboriginal families and research dealing specifically with aboriginal parents' participation in early intervention programs is needed. Family and demographic variables have been found to affect parents' behaviour but little research is available about the impact of these variables on aboriginal parents' rates of participation. Do these variables affect aboriginal parents' ability to participate in programs offered, and if so, are there certain variables which exert a greater influence on their level of participation?

In order to help facilitate participation both the strengths and weaknesses within a family system must first be identified. If variables affecting the levels of parent participation could be identified, this could lead to improvement in program service delivery. Changes to program format could be proposed in an effort to meet the special needs of the aboriginal consumer and to provide a more culturally sensitive program.

CHAPTER 2

Literature Review

Aboriginal parents' participation in early childhood intervention programs can be affected by a variety of variables. Measures of participation need to reflect the qualitative and quantitative different ways that parents can be involved in their early intervention program. The concept of participation and the important family and demographic variables which may affect it will be reviewed.

Parent Participation

Early intervention and program participation.

Justification for addressing the developmental needs of young children resulted from the evaluation of the "Head Start" programs in the United States. These programs generated interest in the creation of very early intervention programs with disadvantaged children up to and including 3 or 4 years of age (Karnes, Teska, Hodgins, & Badger, 1970). Programs were designed to meet the needs of "culturally and economically disadvantaged preschool children" (Shearer & Shearer, 1972, p. 217) and were seen as preventive in nature.

Home based programs traditionally involved parents in the intervention process. Parents were defined and viewed as the: "primary agents" (Karnes et al., 1970), "natural reinforcing agents" (Donachy, 1976), "change agents" (Bricker & Casuso, 1979), and important aids for "generalization" (MacDonald, Blott, Gordon,

Spiegel, & Hartmann, 1974). In the home based model, paraprofessional home teachers saw their role as providing parents with information, strategies and materials needed to help parents work effectively with their children. In other words, parents were most often viewed as being responsible for carrying out programming with their children.

Rationale for involving parents in early intervention programs ranged from the fact that parents spend the majority of the time with the child (Schaub & Ritenour, 1977) to lack of access to qualified therapists and centre based programs (MacDonald et al., 1974; Schaub & Ritenour, 1977). Wulz, Hall, and Klein (1983) reported that parental involvement is essential. Parents should be responsible for the training of their child, and most training should take place in the home where there are natural consequences. Regardless of the reason for including parents in the intervention process, the problem of getting them to actively participate in the program is evident.

During the 1980s, there was a push to evaluate the effectiveness and role of parent involvement in early intervention programs. A review of infant education programs lead Ramey and Bryant (1988) to conclude that those interventions which had a higher number of contact hours with children and also stressed parental involvement had more positive intellectual effects on both children and parental behaviours and family life circumstances. Unsworth (1990) studied a native preschool program on an Alberta reserve and found that over time the parents became increasingly involved in the school and the parents and teachers noted a positive change in the childrens attitudes toward reading and language use. Polmy (1986)

reviewed five programs and concluded that, "...parent/family should be an integral component of infant education programs." (p.89).

Levels and types of participation.

Participation has been measured in many ways. One such measure available is a simple tally of the number of home visits attended. This modest measure fails to encompass all possible aspects of parent participation. A more detailed definition is required if the complex phenomena of parent participation is to be accurately measured. Schutz (1986) outlined the following six types of parental involvement: 1. "passive receptivity", 2. "minimal involvement", 3. "training program participant", 4. "active planning member", 5. "counselor of other parents", and 6. "advocate and policymaker" (p. 296). This orientation adds to the definition of participation in that, it points to the need to consider not only quantitative scoring of parental participation but to also consider the qualitatively different ways parents can be involved in programs.

Highett (1988) reported finding significant differences between parents' and teachers' perceptions of levels of actual and preferred parental involvement. Actual involvement reflected the parents' and teachers' perception of the level of the parents' involvement in the center's classroom over a previous year's period. Preferred involvement reflected the level the parent and teacher would prefer to see the parents' involved. A parent and teacher version of a 26 item questionnaire was utilized in an effort to obtain estimates of perceptions of actual and preferred levels of parental

involvement. Thus, the need to consider not only actual levels of involvement, but the degree to which parents would like to be involved and the degree to which teachers want them to be involved becomes apparent.

Thus, a comprehensive measurement of early intervention program "parent participation" should include the following three components:

1. A quatitative measure of number of sessions attended.
2. A rating of level of parental involvement utilizing a modification and stratification of Shultz's (1986) types of parental involvement.
3. An estimation of the parental and early intervention teachers' perceptions of actual and preferred levels of involvement through the utilization of adaptations of the Highett (1988) questionnaires.

Factors influencing parental participation.

As stated earlier, parents are seen as an important component of effective early intervention programs. Why is it that certain parents are able to participate more effectively and to a greater degree? There are many possible factors which could affect a parent's ability to participate. These factors fall into two general catagories: family variables and demographic variables. Family variables are based on subjective reports by the parents of levels of social support, preceived family needs, parenting stress, parental commitment to intervention, cultural considerations/identity, and health status. The measurement of these variables takes the form of parent report

rating scales. The demographic variables are more objective in nature and involve the recording of statistical information regarding household composition, severity of the child's delay and socioeconomic status.

Family Variables as Predictors of Parent Participation

Social networks and support systems.

Many of the early intervention approaches were created to help those families viewed as socially and culturally disadvantaged (Karnes et al., 1970 ; Shearer & Shearer, 1972). The result was the adoption of the underlying assumption that in order for these people to be effective parents they must adopt the majority culture's values and belief systems. Bronfenbrenner (1977) indicated the need to consider families' cultural patterns as these are part of the families "ecological environment." Dunst et al. (1988) stressed the need to consider the client's unique social system. This perspective "...views a family as a social unit embedded within other formal and informal social units and networks." (p.5). Feather (1991) points out that for aboriginal families in northern Saskatchewan, the extended family can be a source of support but if adequate income is an issue the extended family can quickly turn into a source of added stress. The goal is to find strengths within the social unit and utilize these strengths to help empower the family.

Consideration of a family's social system involves an evaluation of the social network and the supports available to the family. Cochran and Brassard (1979)

defined a social network "...as those people outside the household who engage in activities and exchanges of an affective and/or material nature with the members of the immediate family." (p. 106). Cohen and Syme (1985) broadly defined social supports as "...the resources provided by other persons." (p.4). Mitchell and Trickett (1980) suggested that when developing a theoretical basis for preventative intervention strategies, the influence a supportive social network can have on an individual's ability to adapt to life's psychological pressures must be considered. Personal and psychological development are affected by one's social environment. Mitchell and Trickett (1980) went on to suggest that, "...initiating programs that help individuals and communities to strengthen their systems of social support may reduce vulnerability and risk and increase competence and sense of community." (p.28). If a social network influences an individual's ability to make life changes, then the need to consider broader based family-focused treatment interventions must be entertained. It is important to facilitate the development of resources which will build supportive relationships in the natural network. This, in turn, will decrease the emphasis on treatment solely by professionals.

Supportive social systems have been shown to have many positive effects on styles of parenting. Pascoe and Earp (1984) found that mothers who reported more social supports provided a more stimulating home environment regardless of the number of life changes they had experienced. Greater life satisfaction and improved parental attitudes and behaviours were noted by Crnic et al. (1983). There was also a decrease in adolescent mothers' rejection of their infants when increased levels of

emotional and total support were reported (Colletta, 1981). For mothers of irritable babies, the level of social support was the best predictor of a secure parent-child attachment (Crockenberg, 1981).

Children have also been reported to be influenced by the level of social support in their environments. Cochran and Brassard (1979) reported that people from a child's social network can influence the child both directly and indirectly through the "mediating influence of the parent."(p. 602). Supportive social networks were associated with increased sense of a parent's well being and had positive influences on the child's behaviour and development. Developmentally delayed and at risk children were more likely to make developmental gains if their parents had supportive social networks (Dunst et al., 1986). Boyce (1985) indicated strong ties between social support, health maintenance, and the normal development of the child.

General benefits of supportive social systems have also been reported. These include improved social adjustment (Heller, 1979), ability to cope (Tolsdorf, 1976), aspects of psychological adaptation (Mitchell & Trickett, 1980), longer life span (Berkman & Syme, 1979), levels of reported happiness (Brim, 1974), and protection against negative life stresses (Crnic et al., 1983; Dean & Lin, 1977; Grace & Schill, 1980; Heller, 1979, Wethington & Kessler, 1986).

The need to acknowledge and evaluate the mitigating effects of the role of social supports on parent participation is evident. Dunst et al. (1988) described the "Family Support Scale" as a tool designed to measure sources of support which are helpful to families of young children. This scale was reported to be especially useful

for detecting sources of support which may be assets in helping meet needs. The scale score provides a useful measurement of available social support.

Level of perceived needs.

Dunst et al. (1988) defined a need as "...something (e.g., a resource) that is desired or lacking but wanted or required to achieve a goal or attain a particular end." (p.13). Given this definition, a need can only be identified by the family and can not be based on what a professional believes is needed. Bailey and Simeonsson (1988) stressed that "... the interventionist should address needs that families perceive as important." (p. 110). Dunst and Leet (1987) emphasized the importance of identifying families needs as this may provide insight into reasons for a families' perceived non-compliant behaviour.

Unmet needs were found to have the greatest influence on shaping behaviours. Families who reported inadequacies in family resources "... were less likely to see child-level educational and therapeutic needs as immediately important, and consequently were not likely to invest the time and energy to work on professionally prescribed treatments." (Dunst & Leet, 1987, p. 122). Parents reporting a high level of needs were most likely to exhibit reduced levels of parental commitment toward child focused interventions.

Dunst et al. (1988) identified the "Family Needs Scale" as a tool used to measure resources and supports that a family identifies as needing. The scale has been developed for intervention purposes and can help to identify specific needs and

concerns that are troubling a family. The scale score provides a useful measurement of a family's level of preceived needs.

Levels of parental commitment.

Dunst (1986) reported finding measures of parental commitment significantly related to measures of intrafamily support ($r = .52$, $p < .001$), extrafamily support ($r = .55$, $p < .001$) and overall adequacy of resources ($r = .53$, $p. < .001$). Measuring parental commitment involved evaluating the extent to which parents reported having the time, energy, and investment to carry out child focused interventions. Level of parental commitment was also reported to be negatively influenced by higher levels of perceived needs (Dunst & Leet, 1987). The level of parental commitment may influence both the amount and type of involvement a parent devotes to child focused intervention activities.

The "Personal Allocation Scale" by Dunst (1986) provides an overall measure of the commitment a parent has toward carrying out educational activities with their child. The scale score provides a useful global measurement of commitment.

Levels of parent stress.

The amount of stress that parents experience may also influence the degree to which they are able to participate in early intervention programs. There has been much research into the effects of a variety of variables on stress. Cobb (1976) reported that "...adequate social support can protect people in crisis from a wide

variety of pathological states..." (p. 310). Dean and Lin (1977) looked at how social support affects stress but felt there was inconclusive documentation as to the cause/effect relationship between these variables. Dohrenwend and Dohrenwend (1970) looked at race, socioeconomic status and stress. A review of the literature led these authors to conclude that "...both lower-class and middle class Negroes experience stressors more frequently than their white class counterparts." (p. 120). They also reported a need for the development of more conclusive research. Feather (1991) cited family stress as one of the possible barriers to social health. Pearlin and Radabaugh (1976) reported a connection between level of anxiety and alcohol consumption. They found "...the more intensely one experiences anxiety, the more likely one is to use alcohol to control the anxiety." (p. 657).

Families learning to cope with a handicapped child may be at high risk in that "...the individual's and family's functioning may be impaired because of the associated stresses and complex role changes that accompany the introduction of a handicapped child into a family." (Zamerowski, 1982, p. 42). Farran and Sparling (1988) reported that "parents of young handicapped children are faced with precipitous stress of great magnitude."(p. 351). Embry (1980) found a substantial overlap in the family histories of abused and handicapped children. The most prominent area of delay was in the area of speech and language. This trend was found even if the children exhibited no other problems. "What is remarkable about the frequency of language and speech delays is that this is one area of child functioning that may have the greatest impact on the parent-child relationship." (p.

35). A child's handicapping condition, such as, a speech and language delay can itself be a stressor on the parent-child relationship.

Assessing level of stress is complicated by difficulties in defining the term stress. Kasl (1984) reviewed many studies and outlined some of the methodological problems encountered when attempting stress research. Two main problem areas were with finding a common single definition of stress and controlling for those additional variables which can affect stress levels. Lazarus (1986) points out that stress is a changing concept. "All stress experiences with few exceptions involve a changing relationship between the person and the enviroment as the encounter unfolds and across different encounters." (p. 11). The demands, importance and the meaning of stress are always changing and are as varied as each individual's perception.

Given these difficulties with defining stress it becomes apparent that a measurement of stress which is sensitive to the type of stress experienced by a parent of a child in an early intervention program must be choosen. One instrument available is the "Parenting Stress Index" (Abidin, 1983). This index was reviewed by McKinney and Peterson (1984) who described it as "...a parent self-report instrument designed to yield a measure of the relative magnitude of stress in a parent-child system and to identify the sources of stress." (p. 504). Stressors are divided into three main areas: child characteristics, mother characteristics, and situational/demographic-life stress.

McKinney and Peterson (1984) reported the Parenting Stress Index "...should be helpful as part of a routine assessment in early intervention programs, pre-school

programs, or well-child clinics,..." (p 506-507). The reviewers also stated that this index "...is especially helpful as a screening tool for identification of parent-child systems which contain excessive stressors." (p. 506). The Parenting Stress Index should provide a sensitive and appropriate measurement of level of stress experienced by parents involved in early intervention programs.

Cultural considerations.

Blue and Annis (1985) reported that in Canada the Indian, Inuit, Metis and non-status Indians total in number over 1,000,000. There are 300,000 "status" or registered Indians who belong to some 573 different "bands". There are approximately 2,200 reserves in Canada and 70% of aboriginal people live on these reserves. Foster (1982) reported that there are some 53 distinct indigenous languages still spoken in Canada and all but three are in real danger of becoming extinct due to the scarcity of fluent speakers. Feather (1991) cited statistics for northern Saskatchewan which show that aboriginal people make up about two thirds of the population (44 percent of which are Treaty Indian) compared to only eight percent of the provincial population. Consideration must be given to the cultural values, attitudes and beliefs of this group if programs offered are to be meaningful and acceptable to the local people.

Carlson (1975) noted that the average aboriginal person has been isolated from mainstream Canada for hundreds of years. The reserves are seen by both Aboriginals and non-aboriginals as a form of segregation due to the incompatibility of the

cultures. Many aboriginal people feel that they must give up their cultural identity in order to fit into the mainstream society.

Tylor's classic definition reported culture to be "that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society (1871:1)" (cited in Weiss, 1973). Rosman and Rubel (1985) pointed out that culture "...is an entity having continuity through time" and that it has a "...transgenerational quality since it continues to exist beyond the lifetime of individuals." (p. 8). Kroeber (1987) stated that culture "...is what we learn from other men, from our elders or the past..." (p. 81).

It is proposed that a strong cultural identity may influence an aboriginal parent's participation. A strong cultural foundation may help to create a strong identity which assists in the general organization of one's life. The parent's self image may also be increased by improving knowledge of cultural heritage and sense of belonging to a larger group. The importance of the extended family is a strong cultural value to aboriginal people (Jilek-Aall, 1976). This strong cultural value may well influence an aboriginal parent's view of the strength and availability of social supports.

The definitions of culture provide useful insights into variables which may help to delineate a person's cultural identity. Assessing cultural identity must also include estimations of the strength of cultural beliefs. This can be accomplished by asking the degree to which parents believe cultural activities and beliefs are important, and the amount of importance they place in passing knowledge of their cultural heritage

on to their children.

Health status.

It is unfortunate that aboriginal people in Canada tend to share one common feature, that is, their lives are often characterized by economic dependence and poverty. This results in a lifestyle characterized by "...substandard housing, malnutrition, inadequacy of primary health care and unemployment." (Blue & Annis, 1985, p.215). This lifestyle contributes to problems of "...alcoholism, depression, poor academic achievement, substance abuse and suicide." (p.215). When compared to other groups, aboriginal people have a high incidence of these problems. Feather (1991) reviewed a variety of studies and surveys completed in northern Saskatchewan reserve communities and found "...people rank mental illness, along with alcohol and drug abuse problems, as the leading health problems." (p. 16).

Sobralske (1985) defined health "...as the general condition of the body or mind with reference to soundness and vigor and is further characterized as hale, whole, and vital." (p. 33). Definitions of health can change depending on who is defining it and cultural aspects of a group may further affect a group's perception of health. "Cultural components of health concepts have been excluded or poorly understood." (Sobralske, 1985, p. 34). When looking at social health problems, factors such as poverty and discrimination must also be considered (Feather, 1991).

Schwefel, Svensson and Zollner (1987) reported on long-term unemployment and its contribution to significant negative physical and mental health consequences.

Social support systems and governmental or other aid were found to help moderate these negative consequences. Lifestyles and behaviours can influence an individual's health status. The poor and less well-educated have higher rates of health problems. A review of studies indicated that "...persons under various stresses and life changes increase susceptibility to a wide range of diseases and accidents" (Luft, 1987, p. 208-209). Given the severity and incidence of health problems reported in aboriginal communities, there is a need to identify possible health concerns which may interfere with an aboriginal parent's ability to participate in early intervention programs.

Gartrell (1985) created a "Health Survey" for use in three predominately aboriginal communities in northern Alberta, Canada. The survey requires aboriginal people to identify the presence of any of a list of chronic health problems. The health problems listed include: diseases, substance abuse problems, physical disabilities and emotional disorders. The respondents were then asked to rate the severity of the condition and how much it interfered with their usual activities.

Implicit in Gartrell's (1985) method of estimating health status is that health problems can have a direct impact on a person's ability to participate in daily activities. Also, if there are additional persons in the home who require health care this would, in all likelihood, also decrease the amount of time and energy family members have to participate in added activites. The need to assess not only the health status of the responding parent but to also consider the health status of other individuals living in the home becomes apparent.

An evaluation of the perceived health status of aboriginal families should

include: a) the responding parent's estimation of the perceived level of severity of their own identified health problems and b) an estimation of the number of other health problems in the home and the degree to which caring for these individuals interferes with the respondent's involvement in ECIP activities.

In summary, published rating scales which take the form of parent questionnaires are available for use to quantify and analyze the level of social supports, needs, parenting stress and parental commitment to child focused interventions. The "Family Support Scale" by Dunst, Trivette and Jenkins, and the "Family Needs Scale" by Dunst, Cooper, Weeldreyer, Snyder and Chase (cited in Dunst et al., 1988), have been used to evaluate a families' perceived levels of social supports and needs. The "Parenting Stress Index" (Abidin, 1983) has been used to identify stressors within a parent-child system and the "Personal Allocation Scale" (Dunst, 1986) has been used to provide information regarding the level to which parents have the time, energy and personal investment to carry out child focused intervention programs. These scales have been used extensively with parents whose children have been involved in early intervention programs.

In addition, the available literature has provided the justification and basis for the development of an additional scale to measure cultural identity. This scale has been developed with the unique characteristics of aboriginal families in mind. It is felt that this area represents an additional important variable which may affect an aboriginal parent's participation in an early childhood intervention program.

Demographic Variables as Predictors of Parent Participation

Household composition.

Jilek-Aall (1976) reported that aboriginal people exhibit strong cultural values of belief in collective solutions and importance of extended family. These cultural values could lead to an increased availability of social supports. Feather (1991) reported that northern Saskatchewan aboriginal households are six times more likely to contain two or more families and cautions that an adequate income is needed or this extended family can become a source of added stress.

Thus, an exploration of aboriginal families' demographic characteristics would not be complete without an description of the composition and stability of the household. Size of household and stability information can be obtained by utilizing survey questions requesting: a) the total number of persons, including the respondent, who live in the home and b) the number of times the family has moved in the past five years (The Canada Council, 1976). The age composition of the total number of persons in the home is of most interest as a high adult to child ratio may increase the amount of time and energy any given adult has to devote to teaching activities with one particular child.

Child severity.

The type and degree of a child's handicapping condition has been found to affect the amount of stress reported by families (Beckman-Bell, 1981). Schell (1981) reported that the severity of the handicap often will interfere with the family's ability to cope with parenting. A more severely handicapped child may require more services from a wider variety of professionals. The pronounced differences in a severely handicapped child "...may cause the family to reduce its social life and involvement in the community..." (Schell, 1981, p. 22). Severely handicapped children often require additional help or assistance with many aspects of daily living and higher time commitments are often required to get the child to numerous medical and therapeutic appointments.

It is therefore important to consider the influence of the severity of a child's handicapping condition on a parent's ability to participate in professionally prescribed educational programs. The "Diagnostic Inventory for Screening Children" (Amdur, Mainland & Parker, 1988) is routinely administered by the early intervention programs in Saskatchewan. This test assesses eight developmental areas and assigns a score which is interpreted as average/above average, a possible delay or a probable delay. The staff must undergo different training levels before they are certified to administer this screening test. As not all of the staff have become fully certified, the "Developmental Profile II" (Alpern & Boll, 1980) is also used by the early intervention program staff. The "Developmental Profile II" provides a functional developmental-age level across five developmental skill areas. A child with delays

across many developmental areas will often be considered to be more severely involved.

Socioeconomic status.

Socioeconomic status (SES) has been explored as a demographic variable in many studies. Differences in type of mother-child interactions have been found to vary with differences in SES (Bee, VanEgeren, Streissguth, Nyman & Leckie, 1969; Lewis & Wilson, 1972; Walters & Connor, 1964). Pearlin and Radabaugh (1976) found that "...limited incomes and economic strains contribute to anxiety." (p. 657). Lowitzer (1989) reported that low income families were found to have fewer available sources and resources of support and low SES families were rated by teachers as being less involved in their children's programs. Higher levels of parental involvement could be predicted when the mother possessed a higher level of education and the family had a higher income, level of support and exhibited balanced family functioning.

Blue and Annis (1985) reported that aboriginal families in Canada tend to live in poverty resulting in many problems including high rates of unemployment and poor academic achievement. A lack of formal education can trap people in poverity and unemployment and can in turn be a source of stress (Feather, 1991). A commonly used estimate of SES is Hollingshead's (1957) "Two Factor Index of Social Position." This instrument uses occupation and education to estimate the position that individuals occupy in society. It is important to consider occupational and educational status

when estimating aboriginal families' SES as these aspects are often adversely affected by the factors of unemployment and poor academic achievement.

In Summary

Parental involvement is an important and necessary component of effective early intervention programs. There has been little research dealing specifically with variables affecting aboriginal families' participation in early intervention programs. Available family social supports may act as possible resources to aid in the mitigation of unmet needs and parenting stress may act as a facilitator of parental commitment to services offered. In addition, demographic variables may influence parents' levels of involvement. Thus, the purpose of this study was to document the interaction of the identified family and demographic variables as predictors of aboriginal parents' participation in two early intervention programs operating in northern Saskatchewan.

General Hypothesis

This research study measured the predictability of the variable of parent participation from family and demographic predictor variables. It is hypothesized that higher levels of social support, parent age, parent commitment, adult to child ratios, cultural identity, socio-economic status and lower levels of perceived needs, parenting stress, health problems and severity of the child's handicapping condition would predict higher levels of aboriginal parental participation.

CHAPTER 3

Rationale and Questions

Demographic and family characteristics have been found to significantly influence a parent's ability to participate in programs designed to help their children with special needs or who are at risk for developing delays. Research has shown that certain of these characteristics seem to be more closely associated with well functioning families. A parent's participation in an early intervention program may also be influenced by these characteristics.

Recently, professionals have stressed the need to shift from simply telling parents how they are suppose to participate to looking at how the professional can support and develop increasing levels of participation especially in those families who may be perceived as non-compliant. In order to help facilitate participation the professional must first identify both the strengths and weaknesses within a family system.

My experience working as a speech and language pathologist in northern Saskatchewan with aboriginal families lead me to question how these families' demographic and family characteristics affect their participation in programs being offered. Family and demographic characteristics of a variety of groups of parents have been studied but very little is known about how these characteristics may affect aboriginal parents' participation in early intervention programs being offered. There is also a need to consider the unique strengths and challenges that the aboriginal family may bring with them when becoming involved in these programs. The

primary purpose of this study was to measure the relationship and interaction of identified family and demographic variables on the level of participation of aboriginal parents of preschool children involved in two early intervention programs in northern Saskatchewan. The Dunst et al. (1988) "Family Support Scale" and "Family Needs Scale"; the Dunst (1986) "Personal Allocation Scale" and the Abidin (1983) "Parenting Stress Index" have been published in an effort to qualitatively and quantitatively measure a variety of family characteristics. The Highett (1988) "Parent Involvement Scales," Gartrell (1985) "Health Survey" and the Schutz (1986) types of parental involvement were adapted so that they would more directly relate to parents of children involved in early intervention programs. The "Cultural Identity" scale needed to be developed by the experimenter in an effort to capture some of the unique characteristics of the aboriginal family.

The act of participation can be defined and measured in many ways. In an effort to include a variety of aspects of participation six different measures of parent participation from three different sources were included in this study. The parents were asked to rate how they were actually and would prefer to be involved in their early intervention program and their early interventionist was asked to complete the same rating scale according to how they would rate the actual and preferred involvement of the parent. The early interventionists were also asked to rate the level that the parents became involved in each home session and in addition, the total number of scheduled home visits attended (sessions attended) by the parent was used as a final measure of participation.

The following demographic and family characteristics were measured using a combination of published, adapted and experimenter-generated scales or questionnaires:

1. Family supports
2. Family needs
3. Personal allocation
4. Parenting stress
5. Health status
6. Cultural identity
7. Socioeconomic status
8. Family mobility
9. Adult to child ratio in the home
10. Child severity
11. Age of the parent

The following two questions were proposed:

1) Is there an association among the predictor variables which will help account for the greatest variance in each of the criterion measures of parent participation?
2) Are there any significant relationships between the individual predictor and/or criterion variables?

In summary, this study was interested in the combined effects of the eleven identified predictor variables on each of the six measures of parent participation. Significant relationships between any two individual predictor and/or criterion variables were also of interest, as they may provide additional insight into the relative importance of these measures when working with aboriginal families.

CHAPTER 4

Methodology

Subjects

Parent factors.

The subjects included 20 aboriginal parents, 16 of Cree and 4 of Dene (Chipewayan) ancestry whose children were currently involved in or who had been discharged within the last 2 years from the Children North and Wecihik Awasisak Early Childhood Intervention Programs (ECIP). The Children North ECIP is based out of La Ronge Saskatchewan and the Wecihik Awasisak ECIP program is based out of Ile ala Crosse Saskatchewan. Each ECIP is responsible for providing home based services to families in communities within a designated area in Northern Saskatchewan. Families of preschool children with identified delays or handicaps or who are at risk for delay typically receive a scheduled home visit once every two weeks. Travel to outlying communities is accomplished by road, air and in some instances water.

The subjects were asked by their ECIP worker to volunteer to take part in the study. Subjects were paid $10.00 for their participation. Ten parents volunteered from each program for the total of 20 subjects. The subjects resided in a total of 10 different communities. Nineteen mothers and one father were interviewed and all but two reported to be the identified child's natural parent. Subjects ranged in age from 17.5 to 49.3 ($\bar{x}$ 29.6) of which eight reported to be of treaty status. The reported highest grade level achieved ranged from grade five to ten ($\bar{x}$ 7.7).

Early interventionist factors.

Each parent was rated by their designated early interventionist. Three different female early interventionists were involved in generating three of the criterion measures. All the interventionists had been working for at least one year. Two worked for the La Ronge-Children North ECIP and the remaining interventionist was hired by the Ile ala Crosse-Wecihik Awasisak ECIP. The two La Ronge workers were caucasian and the Ile ala Crosse worker was aboriginal.

Test Instruments

Measurement of the criterion variable "parent participation" included the utilization of the following three nonstandardized scales:

Actual and Preferred Involvement (appendix A and B).

Actual and preferred levels of parental involvement were rated by the parent and the family's early interventionist for a total of four different measures. These measures were adapted from a scale designed by Highett (1988). The total number of items was reduced from 26 to 15 and the wording of individual items was changed to reflect different ways a family could be involved in their child's early intervention program. The adapted scale, like the Highett scale, had two versions. One measured the parent's view of "Actual and Preferred Involvement" (appendix A) and one measured the ECIP home teacher's (early interventionist's) view of a parent's "actual"

involvement and the level the early interventionist would have "preferred" the parent to be involved (appendix B). These questionnaires listed fifteen different ways a parent could be involved with the ECIP. Level of parental involvement was ranked on a five point scale ranging from never (1) to always (5). An "NA" (not applicable) category choice was also available. Items scored as "NA" were omitted from scoring as these items reflected a lack of access to or experience with the identified types of involvement. An average scale score was calculated for actual and preferred levels of involvement based on both the parent's and early interventionist's perceptions by taking the total scale score and dividing it by the number of non "NA" items.

Levels of Parental Involvement Scale (appendix C).

The level of parental involvement was measured using the nine point scale, "Levels of Parental Involvement". This scale was created from adapted definitions of types of involvement as described by Schutz (1986). The scale ranked a parent's level of involvement from non-involvement (0) to active planning team member (8). The early interventionists were asked to rate each of their identified family's level of parental involvement according to this scale.

The following standardized and clinician generated scales were used to measure the identified family predictor variables:

Family Support Scale (appendix D).

The Dunst et al. (1988) "Family Support Scale" was designed to be used with parents whose children were involved in early intervention programs. This 18 item scale asked respondents to rate how helpful the listed sources of support have been to their family. The ranked items on this scale ranged from not at all helpful (1) to extremely helpful (5). This scale contained a "NA" choice which was to be used when any support listed was deemed to be "not available" by the respondent. An extra item, "Band services" was added to reflect an additional source of support that may have been accessed by the aboriginal families in this study. A total scale score was generated by simply totalling all item responses for the scale for a total possible score of 95+ (a higher score could have been obtained if the parent added additional sources of support not covered by the scale).

The test-retest reliability for the "Family Support Scale," taken one month apart, was $r = .91$ ($p < .001$) for the total scale scores. Evaluation of the validity of the scale was reported in terms of the relationships between the total scale score and a number of parental beliefs and parent, family and child outcomes. The total scale score was reported to be consistently related to personal well-being (average $r = .28$, $p < .01$), the integrity of the family unit (average $r = .18$, $p < .01$), parent perceptions of child behaviour (average $r = .19$, $p < .05$), and opportunities to engage in parent-child play (average $r = .40$, $p < .001$).

Family Needs Scale (appendix E).

The Dunst et al (1988) "Family Needs Scale" was a 41 item scale which asked parents to indicate at which level they needed any of the listed types of help or assistance. The ranked items on this scale ranged from almost never (1) to almost always (5). The listed types of help or assistance could also be designated as "NA" (not applicable). An extra item, "Having information about alcohol/drug abuse problems" was added as these problems were identified concerns within the aboriginal population. A total scale score was generated by tallying the scores for each item for a total possible score of 210+. As in the "Family Support Scale," a higher score could be obtained if the parent identified additional items (needs) not covered by the scale. None of the subjects added any additional items for either the "Family Support Scale" or the "Family Needs Scale."

The "Family Needs Scale" split-half reliability (even- vs. odd-numbered items) was reported to be .96 corrected for length using the Spearman-Brown formula. The total scale score for the "Family Needs Scale" is reported to be significantly related to well-being ($r = .42$, $p < .01$), decision-making ($r = .40$, $p < .01$), and internal locus of control ($r = .28$, $p < .05$). For further discussion regarding the reliability and validity of this scale please refer to Dunst et al., (1988).

Personal Allocation Scale (appendix F).

The Dunst (1986) "Personal Allocation Scale" was used to provide a general measure of parent commitment to prescribed interventions. It measured the extent to

which parents had the time, energy, and personal investment to carry out early intervention educational activities. The three ranked items on this scale ranged from none (0) to a lot (10) and a total scale score was computed by totalling the responses for all three items for a total possible score of 30. This scale was reported to be both reliable and valid. The coefficient alpha computed from the average correlation of the three items was reported to be 0.93 where, the coefficient alpha computed from the average correlation of the three items with the total score was reported to be 0.98. The test-retest reliability coefficient for the total scale score taken two to three months apart, was reported to be 0.32 ($p < .025$), (Dunst, 1986).

Parenting Stress Index (appendix G).

The "Parenting Stress Index" is a parent self-report questionnaire designed to identify sources of stress and to measure levels of stress associated with parenting. The three major categories of stressors assessed were: child characteristics, mother characteristics and situational/demographic-life stress. Respondents were asked to react to 101 statements using a five point scale ranging from strongly agree (1) to strongly disagree (5) for a total possible score of 505. This scale was reported to be used with parents with at least a fifth-grade reading level and who had children aged three and under. Abidin (1984) indicated that test-retest reliability was reported to range from .55 to .82 for the Child Domain, .69 to .91 for the Parent Domain, and .65 to .96 for the total stress score.

Cultural Identity Scale (appendix H).

The "Cultural Identity" questionnaire was created from a variety of definitions of culture and was designed to encompass an additional variable of interest not covered by standardized questionnaires. This nonstandardized questionnaire asked respondents to rate: a) the degree to which they believed it was important to perform or know about a variety of listed cultural variables and b) the importance they attached to passing on information regarding these cultural variables to their children. The items from both the "a" and "b" sections were rated on a five point scale ranging from not important (1) to most important (5) and all items were summed to generate a total "Cultural Identity" score. A total scale score of 50 was possible.

Health Status Scale (appendix I).

The "Health Status" questionnaire contained questions adapted from Gartrell's (1985) "Health Survey." The Gartrell survey asked aboriginal adults on three reserves in Alberta about their and their communities identified health issues and problems. The health survey was contained in a 50 page booklet and took about 45 minutes to 1 hour to complete. For the purposes of this study, the Gartrell survey was used as a guide and the concepts of rating the severity of health problems and the frequency that identified problems interfered with activity levels was maintained.

The adapted "Health Status" scale had two parts: a) which asked the respondent to rate the severity of a list of identified health problems and b) asked the respondent to rate the degree to which any of the listed health problems interfered

with the respondent's involvement in ECIP activities. Severity was rated on a six point scale ranging from not at all severe (1) to very severe (6) and the degree of interference in ECIP activities was also rated on a six point scale ranging from rarely (1) to all the time (6). This questionnaire generated total "health" score by tallying the severity and interference item scores for a total possible score of 48.

The following demographic predictor variables were obtained through parent report and from information available from the families' ECIP files:

Socio-economic Status (appendix J).

"Socio-economic Status" information was obtained and calculated using the Hollingshead (1957) "Two Factor Index of Social Position." This index uses the level of education and the occupation of both parents to calculate the SES score.

Child Severity (appendix L).

The severity of the child's handicapping condition was specified using the child's "Diagnostic Inventory for Screening Children" (DISC) test score (Amdur, Mainland & Parker, 1988) or the "Developmental Profile II" (Alpern & Boll, 1980). The DISC test is routinely administered to all ECIP clients by the home teacher and assigns a rating of average, possible delay or probable delay to each of eight developmental areas. Only the number of probable delay areas was used to estimate child severity. For some children a DISC score was not available, so the "Developmental Profile II" was used as an estimate of child severity. This profile

gives a developmental age level across five skill areas. Only those skill areas with more than a six month delay were used to estimate child severity.

In order to obtain a global estimate of child severity, children were place in one of three severity catagories: 1=mild, 2=moderate and 3=severe. For the DISC, probable delays in up to two areas was a rating of 1, probable delays in three to five areas was a rating of 2 and probable delays in six to eight areas rated a 3. For the "Developmental Profile II", a delay in one skill area rated a 1, delays in two to three skill areas rated a 2 and delays in four or five skill areas rated a severity score of 3.

Procedures

Each participating family was given the option of being interviewed in either their home, local health office or ECIP office. The majority of the subjects preferred to be interviewed in the home. All interviews were completed in one session and took approximately one hour to complete. All families were asked if an interpreter was needed and the subjects general english proficiency was checked with the ECIP worker. The use of an interpreter was not requested by any of the subjects. All questions were read to each subject by the experimenter and a copy of each questionnaire was provided for their visual inspection. The subjects were encouraged to indicated their response either verbally or through pointing and the experimenter recorded each response as it was given. The order of presentation of the predictor and criterion variables was standardized across subjects.

Criterion variables.

The subjects completed the required forms in the above described manner to obtain their view of levels of actual and preferred involvement utilizing the "Actual and Preferred Involvement: Parental view" questionnaire. Their assigned early interventionist was requested to rate each subject's level of participation utilizing the following two instruments:

1) Actual and Preferred Involvement: Home teacher's view

2) Levels of Parental Involvement

The instruments were reviewed and described to each ECIP worker and the experimenter was available to answer any questions that they might have. The early interventionists were then provided a copy of each questionnaire for each family taking part in the study and asked to complete them on their own. The experimenter picked up the completed copies.

Predictor variables

Following the procedures outlined subjects were also asked to provide the following information and to complete the following scales and questionnaires:

1) The Family Support Scale

2) The Family Needs Scale

3) The Personal Allocation Scale

4) The Parenting Stress Index

5) Cultural Identity

6) Health Status

7) Socioeconomic Status

8) Family Mobility

9) Adult to Child Ratio in the Home

10) Respondent age

The "Household Composition" form (appendix L) was used to record information regarding family mobility, adult to child ratio in the home and parent age. Family mobility was scored as the total "number of different residences in the past five years." The adult to child ratio was obtained by dividing the number of adults living in the home by the number of young children under the age of 12 living in the home. Information regarding the severity of the child's handicapping condition was obtained from the child's ECIP file and was recorded on the form found in appendix K. When the "DISC" score was not available the "Developmental Profile II" score was noted and both scores were converted to an overall "Child Severity" score as described previously.

Thus, in summary the following is a list of the criterion and predictor variables measured and their cooresponding abbreviations:

Criterion Variables:

1) Actual Involvement-Parent (AIP).

2) Preferred Involvement-Parent (PIP).

3) Actual Involvement-Home teacher (AIT).

4) Preferred Involvement-Home teacher (PIT).

5) Levels of Parental Involvement (LPI).

6) Sessions Attended (SA).

Predictor Variables:

1) Family Support Scale (FSS).

2) Family Needs Scale (FNS).

3) Personal Allocation Scale (PAL).

4) Parenting Stress Index (PSI).

5) Cultural Identity Scale (CI).

6) Health Status Scale (HS).

7) Socioeconomic Status (SES).

8) Family Mobility (FM).

9) Adult to Child Ratio (AC).

10) Respondent Age (RA).

11) Child Severity (CS).

11) Respondent Age (RA).

Reliability

Subject reliability.

Immediately after each subject's interview was completed a total of ten items from six of the scales/questionnaires were readministered. The relative number of items retested in each scale depended on the number of items in the scale. One item

was retested in each of the AIP, PIP and FSS scales. Two items were retested in the FNS and the CI scale and three items were retested in the PSI. Items in the HS scale were not retested as the majority of subjects reported low scores. The remaining variables were not included as the information was obtained through the parent interview and/or from the families' confidential ECIP files.

StatView SE computer software by Feldman, Hofmann, Gagnon and Simpson (1988) was used to analyze the reliability data. A Spearman Rank-Order Correlation as described by Bruning and Kintz (1987) was computed for each of the retest items. An N=20 was used to compute the following correlations and the "Z score corrected to ties" was reported in each case:

1) AIP: Z= 2.783 and p= .005

2) PIP: Z= 4.359 and p= .000

3) FSS: Z= 3.034 and p= .002

4) FNS:

    a) Z= 3.323 and p= .001

    b) Z= 3.089 and p= .002

5) CI:

    a) Z= 3.257 and p= .001

    b) Z= 2.745 and p= .006

6) PSI:

a) Z= 2.496 and p= .013

b) Z= 2.585 and p= .010

c) Z= 1.293 and p= .196

These results reveal significant correlations for all the test/retest reliability items with the exception of the one PSI item. The PSI retested item "c" was item 99 in the index, "Having a child has caused changes in the way I sleep." The low reliability of this item may have been due, in part, to the large number of items in this measure and the fact that it occurred late in the scale. In addition, the wording of many of the items seemed to pose some difficulty for many of the clients (please refer to Chapter 6 for further discussion regarding this measure).

Early interventionist reliability.

Reliability was calculated using two of the three early interventionists. One interventionist from each of the programs was asked to redo the LPI, AIT and PIT scales for two of the subjects for a total of 20% of the subjects.

The total point-to-point reliability for the LPI scale was 75%. One interventionist's rating changed from a three to a two score while the remaining three retest scores were exact matches. An average score was again calculated for the retest measures for each of the AIT and PIT scores. The mean difference in the test/retest scores for AIT was .25 with a maximum difference= .5 and a minimum

difference= .1. The mean PIT score difference= .43 with a maximum difference= 1.0 and a minimum difference= .1.

Intra/Inter-rater reliability.

A randomly selected twenty percent of all the scales and questionnaires were rescored by the experimenter and a total score point-to-point reliability of 100% was achieved. Inter-rater point-to-point reliability for a randomly selected 20% subset of the subject scales/questionnaires was 98%.

CHAPTER 5

Results

A stepwise multiple regression analysis as described by Kelly, Beggs, and McNeil (1969) was chosen in order to measure the combined effects of the predictor variables on each of the six criterion measures of parent participation. Each of the predictor and criterion variables was tested to ensure there was no significant difference between the scores of the La Ronge and Ile ala Crosse ECIP groups. These scores are reported as justification for combining the two groups when looking at the different measures of participation. Descriptive and group statistics are provided below for each of the predictor and criterion measures followed by a reporting of the multiple regression and correlation results.

Descriptive and Group Statistics

Subject data can be found in Table 1 and descriptive statistics in Table 2. To test for differences between the La Ronge and Ile ala Crosse groups a Mann-Whitney U-Test or t-Test as described by Bruning and Kintz (1987) was computed using StatView SE (Feldman et al., 1988). If the variable's level of measurement was ordinal the Mann-Whitney U-Test was used.

There were no significant differences between groups at the $p=.05$ level for all the demographic and all but one of the family predictor variables between the LaRonge and Ile ala Crosse ECIPs. The "Parenting Stress Index" (PSI) scores for the LaRonge ECIP parents revealed a median score of 280 and the Ile ala Crosse ECIP

median score was 325. The LaRonge and Ile ala Crosse group scores for the Parenting Stress Index had a Z corrected for ties=-3.327 and a p=.001 indicating that the scores for the two groups very likely differed in a significant way.

The large number of questions and range of scores may have accounted for, in part, the significant difference in scores between the groups. In addition, the wording of the questions requires the respondent to be able to agree and disagree with both affirmative and negative statements. When an answer was given which did not fit with the overall response pattern of the subject, the examiner questioned the subject to ensure that they had indeed intended to answer the statement in that manner. Often, on further questioning the subject indicated that they had indeed intended the exact opposite response to which they had given. This was often attributed to lack of understanding of wording of the question.

The "Preferred Involvement-Teacher" (PIT) criterion variable also generated a significant Z corrected for ties score. For the PIT measure the LaRonge ECIP had a median score of 4.40 and the Ile ala Crosse ECIP exhibited a median score of 3.61. The Mann-Whitney U-Test revealed a Z=-3.126 and a p=.002. For the PIT measure three different ECIP workers (two with the LaRonge ECIP and one with the Ile ala Crosse ECIP) were responsible for providing the data. The difference in these scores may be attributable to differences in expectation on the part of the different ECIP workers.

Thus, given that the La Ronge and Ile ala Crosse ECIPs differed significantly on only 2 of the total 17 variables measured, the experimenter felt collapsing the two groups was justified.

Multiple Regression and Correlations

The computerized statistical program SPSS was used to perform the analysis on the experimental data. Walsh (1990) described multiple regression as "...a tool for evaluating the overall dependence of a variable on a set of independent variables." (p. 273). This analysis generates a multiple R statistic which represents the correlation between two or more predictor variables and a criterion variable. The R squared statistic relates to the percentage of variance accounted for by the combinations of predictors. Walsh (1990) suggested using the more conservative adjusted R squared estimate of explained variance when using a small sample size and/or large number of predictor variables. The specific experimental questions were:

1) Is there and association among the predictor variables which will help account for the greatest variance in each of the criterion measures of parent participation?

Analysis of the data utilizing stepwise multiple regression revealed that no variables were entered/removed during the first step before the .050 limits were reached for the criterion variables of: "Actual Involvement-Parent" (AIP); "Preferred

Involvement-Parent" (PIP); "Actual Involvement-Teacher" (AIT) and "Levels of Parental Involvement" (LPI). This indicated that none of the identified predictor variables accounted for a significant amount of the variance in each of these individual criterion measures.

One variable was entered during step one for both the "Preferred Involvement-Teacher" (PIT) and "Sessions Attended" (SA) criterion variables but no additional variables were found to account for any additional increased explanation of variance. For the criterion variable of PIT the predictor variable "Parenting Stress" (PSI) was entered on step number one revealing an adjusted R squared= .172, F= 4.726, p= .044. For the criterion variable of SA the predictor variable of "Health Status" (HS) was entered on step one revealing an adjusted R squared= .483, F= 16.877, p= .001. For these two criterion measures step two of the regression was not calculated as a second predictor variable could not be found which interacted in any significant way with the step one variable to account for an additional increase of explained variance. The purpose of choosing a multiple regression analysis was to measure the combined effects of the predictor variables. Thus, none of the predictor variables combined in any significant way to account for the different measures of parent participation.

2) Are there any significant relationships among the individual predictor and/or criterion variables?

Correlations between criterion variables.

The most significant relationships among the criterion variables were found between the variable of "Actual Involvement-Teacher" (AIT) with the variables of "Levels of Parental Involvement" (LPI) (r= .77, p= .00) and "Preferred Involvement-Teacher" (PIT) (r= .636, p= .001). "Actual Involvement-Parent" (AIP) was positively correlated with "Preferred Involvement-Parent" (PIP) (r= .457, p= .022).

Correlations between predictor variables.

The following predictor variables were significantly correlated: "Health Status" (HS) with "Respondent Age" (RA) (r= .505, p= .012) and "Parenting Stress" (PSI) (r= -.419, p= .033); "Family Mobility" (FM) with "Cultural Identity" (CI) (r= -.423, p= .032) and "Family Support" (FSS) with "Personal Allocation" (PAL) (r= .465, p= .019).

Correlations between criterion and predictor variables.

The criterion variable of "Preferred Involvement-Parent" (PIP) was significantly correlated with the predictor variables of "Personal Allocation" (PAL) (r= .415, p= .035); "Socioeconomic Status" (SES) (r= .449, p= .024) and "Health Status" (HS) (r= -.411, p= .036). The criterion variable "Sessions Attended" (SA) was related to "Health Status" (HS) (r= .716, p= .00) and "Respondents Age" (RA) (r= .519, p= .011). The predictor variable "Parenting Stress" (PSI) was found to be

related to the criterion variables of "Preferred Involvement-Teacher" (PIT) (r= -.466, p= .019), "Levels of Parental Involvement" (LPI) (r= .446, p= .024) and "Sessions Attended" (SA) (r= -.496, p= .015).

Smith and Glass (1987) reported that strong predictor variables in a multiple regression analysis should exhibit moderate to low correlations with each other and high correlations with the criterion variable. The lack of high correlations between individual predictor and criterion variables may have accounted, in part, for the lack of predictability from the multiple regression.

CHAPTER 6

Discussion

Criterion Variables

Actual and preferred involvement rating scales.

Highett (1988) found statistically significant differences between the actual and preferred involvement scores for both parents and teachers. Parents and teachers were both found to prefer that the parents of children involved in early education programs were more involved. This result was duplicated in this study. A t-Test for related measures revealed a statistically significant difference between the AIP and PIP scores ($t = 6.54$, $p = .00$) and AIT and PIT scores ($t = 7.37$, $p = .00$). In addition, significant correlations were found between these two pairs of measures.

These results indicated that regardless of the actual level of perceived participation both the parents and the early interventionists would prefer the parents to be more involved. One wonders if this desire for increased levels of parent participation becomes a motivational factor for increasing levels of participation or does this discrepancy in actual and preferred involvement, itself, become a stressor for both the parent and the early interventionist.

A significant difference was also found between the preferred involvement scores for each ECIP program even though the actual involvement scores for each group were not significantly different. The difference in preferred involvement was most likely attributable to the varying personal expectations of the different early interventionists. The La Ronge ECIP early interventionists had a significantly higher

expectations of parent participation than did the Ile ala Crosse interventionist.

Feather (1991) discussed that strategies for change in northern Saskatchewan should include involving community members and leaders in both problem analysis and solutions. It is important to understand a community's strengths and weakness when planning any type of intervention. The differences found between the early interventionists may have been due, in part, to cultural differences in expectation of parent participation as the La Ronge workers were caucasian and the Ile ala Crosse interventionist was aboriginal. The aboriginal interventionist may have been more "culturally intune" with a realistic ideal of level of participation. Also, being a member of the community that she serves would offer her insight into the community's strengths and challenges.

The significant negative correlation found between the "Preferred Involvement-teacher" (PIT) and "Parenting Stress" (PSI) variables may suggest that the early interventionists were reducing their level of expectation of parental involvement in relation to perceived increased levels of parent stress. It is also interesting to note that for the criterion variable of PIT the predictor variable of PSI was found to account for the greatest variance in this measure. Concerns regarding the strength of the PSI measure as a culturally sensitive predictor of an aboriginal parent's level of stress are explored later in this chapter. The relative usefulness of the PIT score as a criterion measure of parent participation is also questioned, given, the extreme subjective nature of this score. Thus, although this was a significant finding, the usefulness of this information must be considered.

Levels of parental involvement.

The criterion variable of "Levels of Parental Involvement" (LPI) was found to have significant positive correlations with the criterion variable of "Actual Involvement-Teacher" (AIT) and predictor variable of "Parenting Stress" (PSI). One would expect to find a strong positive correlation between the interventionist generated criterion rating of level of and actual parental involvement indicating that higher levels of involvement were related to higher levels of participation in home visits.

The significant positive correlation between LPI and PSI is difficult to explain. It was expected that higher levels of stress would be associated with lower levels of parental involvement. It may be important to acknowledge the presence of parent stress as an indicator for the need to access available community resources. Increased levels parent stress may motivate the parent to seek out additional forms of support such as ECIPs. The concerns, discussed later in this chapter, regarding the PSI as an appropriate measure of stress in aboriginal families may provide some further insight into this finding.

Sessions attended.

The predictor of "Health Status" (HS) was found to account for a significant amount of the variance in the criterion variable of "Sessions Attended" (SA). An unexpected strong positive correlation was found between these two variables revealing that increased health problems in the home was significantly related to a

higher number of sessions attended. Given the incidence of health problems in the aboriginal population (Blue & Annis, 1985), it was expected that a higher HS score would predict lower levels of participation. This is especially true since, the adapted scale asked parents to rate the level at which health problems interfered with ECIP activities.

Visual inspection of the data reveals that subject number 11 had, by far, the highest number of health problems in the home and the highest number of home visits. At the time of this study, the early interventionist for this family indicated that this family was in a state of crisis. In response to the high needs of this family the ECIP worker had increased the number of home visits. The observed significant results were felt to be a reflection of the extreme scores of this one family.

Predictor Variables

Family supports, needs and personal allocation.

The "Family Support Scale" (FSS), "Family Needs Scale" (FNS), (Dunst et al, 1988) and "Personal Allocation Scale" (PAL) scale (Dunst, 1986) were reported to be significantly correlated with a variety of positive family characteristics. This experimenter hypothesized that high levels of social supports and personal allocation would be associated with lower levels of identified family needs. Higher levels of social supports and parent commitment may serve to mitigate a family's perception of an identified need.

The FSS was found to be significantly correlated with PAL as expected but the

FNS was not significantly correlated with either scale and in fact revealed a weak positive association with both scales. Feather (1991) cautioned that the aboriginal extended family can be a source of support unless they are placing extra demands on the family itself. In addition, many of the identified possible needs in the FNS may have not been available needs options for many of the families interviewed. It is possible that for many of the families just meeting the basic day to day needs may have been the foremost priority. Once a family has met these basic needs they may then look for ways to meet yet unidentified needs. For example, lack of available employment and reliance on social assistance in many of the northern communities may preclude the identification of "getting a job" and "having a satisfying job" as possible needs. Other scale items such as, "finding a school placement for my child" may become non-issues as there is usually only one option available to the parents.

The simple act of identifying certain items in the FNS requires that the responding family's cultural belief system has identified these items as legitimate and desirable family needs. An urban family with a child with special needs would, for all intensive purposes, have a different set and hierarchy of needs than a similar family living in a remote northern fly in community. Thus, a family's FNS score may say as much about a family's cultural belief system as the number and extent of their needs.

Parenting stress.

Abidin (1990) indicated that parents should be referred for professional

consultation if they earn a total stress score at or above the 90th percentile (raw score = 267). All but two of the subjects in this study had scores well above the 90th percentile and the two remaining families scored around the 70th percentile. This raises the following questions: Is this index an appropriate and useful measure as a predictor of participation of an aboriginal family and/or of a family with a handicapped child? How much stress is too much? Does it become helpful to further differentiate families who are already exhibiting a significant level of stress or is there a threshold level of stress beyond which added stress has no further impact on a parent's ability to participate?

The "Parenting Stress" (PSI) measure was significantly positively correlated with the criterion variable "Levels of Parental Involvement" (LPI) and significant negative correlations were found with the criterion variables "Sessions Attended" (SA) and "Preferred Involvement-Teacher" (PIT) and with the predictor variable "Health Status" (HS). Some of these correlations, although significant, are unexpected. High levels of parental stress were expected to be correlated with lower levels of preferred parental involvement and a reduced number of sessions attended but the finding of high stress levels correlated with a higher LPI score and lower HS score was unexpected.

The correlations found between the PSI and criterion measures of PIT, LPI and SA may have been partly due to the different aspects of participation that these three criterion variables measured. One would hope that an ECIP program would be sensitive to level of stress present in a family system and change its program

expectations accordingly. Increased levels of stress could lead to a reduced number of home visits that are able to be scheduled and/or attended. The home visits themselves may become a form of support, so that when a visit is made the parents become involved in the process.

During the interviews it became apparent that the wording of many of the index items may have posed a problem given the grade level of the parents and the issue that english was a second language for many of the subjects. In order for parents to be able to reliably answer the questions they had to be able to correctly agree and disagree with both affirmative and negative statements. Whenever possible when an answer was given which did not fit with the overall response pattern of the subject, the examiner questioned the subject to ensure that they had indeed intended to answer the statement in that manner. Often, on further questioning the subject indicated that they had indeed intended the exact opposite response to which they had given. This was often attributed to lack of understanding of the wording of the question.

Given the correlational results, one must question whether or not this scale is a sensitive and valid measure of the level of stress experienced by aboriginal families living in remote northern communities. Is stress, as it is defined and measured by the PSI, appropriate to use within the population studied. Item 75 in the scale asks the parent if they strongly agree to strongly disagree with the statement, "I am unhappy with the last purchase of clothing I made for myself." Many of the parents appeared confused as to why this question was included indicating that it may not be and

accurate indicator of stress in their culture. Another item asked the subjects to rate themselves as a parent. One of the parents indicated that she felt she was a very good parent because if there was drinking occurring in the home she made sure that her child was taken to a safe location. This interpretation of the question was valid given her life circumstances but I question as to whether or not this was the true intent of the question.

Health status and cultural identity.

The "Health Status" (HS) and "Cultural Identity" (CI) scales were experimenter generated in a attempt to account for additional variables which might impact on aboriginal families' ability to participate in an early intervention program. As expected, more health problems were noted as the age of the responding parent increased. Stronger levels of cultural identity were associated with more stable living conditions (i.e. fewer residences in a five year period).

Neither of these measures was significantly correlated with any of the criterion measures of parent participation. The accuracy of the reporting of health status was questioned. Many parents may have been reluctant to reveal health issues of concern in the home. Most of the parents felt that some of the aspects of cultural identity listed were important to their family but higher scores on this measure did not interact in any significant way with their ability to participate.

Demographic predictor variables.

No significant correlations were found between "Socioeconomic Status" (SES), "Adult to Child ratio in the home" (AC) or the "Severity of the Child's handicapping Condition" (CS) and any of the other variables. For the SES variable the vast majority of the subjects were placed in the lowest socioeconomic category. As with the "Parenting Stress" (PSI) score one wonders about the relative predictive value of this measure given the homogeneity of the group. Significant correlations relating to the "Family Mobility" (FM) and "Respondent Age" (RA) variables have been discussed earlier. The reason for the finding of a relative lack of significant correlations within the group of demographic predictor variables may have been partly due to the relative homogeneity of the group and lack of sufficient subject numbers.

Conclusions

This study attempted to determine which combinations of family and demographic variables were associated with higher levels of aboriginal families' participation in two early intervention programs in northern Saskatchewan. It was hoped that this set of scales and/or measures could then be administered to new families entering the ECIP programs in an effort to predict which families might be at risk for low levels of participation. It was hoped that, if potential obstacles to participation could be determined in advance of a family entering a program, proactive steps could be taken in an effort to help facilitate and support an individual

family's ability to participate.

Several trends seem to account for the lack of discovery of a significant set of predictor variables. The most disappointing finding was the lack of significant correlations between the predictor variables and any of the criterion measures of parent participation. In fact, the most significant relationships were found within the sets of predictor and criterion variables. These relationships within the set of predictor and criterion variables may provide some interesting descriptive information about the families involved in these ECIP programs but the variables chosen do not appear to account for the varying levels of participation seen in these families.

The results must also be interpreted with a great deal of caution due to the high number of variables entered into the multiple regression with a low number of subjects to support the number of measures. Some of the variables chosen characterized the group as being quite homogeneous. For the SES and PSI measures the scores clustered around the low and high ends of the scales respectively. The low variance in these measures brings into question how valuable they become as predictors of participation. One would assume that there are threshold levels for these variables beyond which lower standards of living and higher levels of stress no longer continue to influence a families ability to participate.

The fact that three of the six criterion measures were generated by three different early interventionists also may have influenced the results. Early interventionists bring their own set of beliefs and expectations. This high variance in the early interventionists responses may have contributed to the differences in the

criterion variables between groups and in turn contributed to a lack of significant findings. The creation and utilization of less subjective measures of participation would be useful, but, the design of such a measure is beyond the scope of this study.

Thus, both low and high variance found in the measurements of some of the variables seemed to adversely affect the significance of the findings. Also, the reliability and validity of using pre-packaged scales and questionnaires with culturally different groups must be considered. Many measures of family characteristics carry with them cultural biases as to what are positive and negative aspects to a characteristic. It is difficult to delineate with any certainty a universal set of characteristic needs or stressors as family responses to these factors are often context dependent.

The results of this study support the need for further research into the unique strengths and needs of the aboriginal family. Methods chosen to both predict and monitor a family's participation must be culturally appropriate and sensitive. The discovery and support of strengths within a family system can only help to facilitate their ability to utilize programs offered to their full potential.

Limitations of the Study and Implications for Future Research

Some of the limitations of this study and implications for future research are as follows:

(a) The number of subjects in this study was low given the statistical procedure and number of variables of interest. There needs to be further research dealing with

larger numbers of aboriginal people for each of the variables studied.

(b) Generalizations to other cultural or aboriginal groups is limited given the homogeneity of the subject group.

(c) All the families in this study were identified as needing the ECIP program and participated to at least a minimal degree. More information is needed about those families who are unable to seek out or maintain the support of programs being offered.

(d) There needs to be more research to help define characteristics specific to the aboriginal family. These characteristics should include culturally sensitive measures to help define a "healthy well functioning family" from a "family in crisis."

(e) There is a lack of research about the characteristics of aboriginal families with a handicapped child.

Table 1. Subject Data for the Criterion & Predictor Variables

Group	Subject	Criterion Variables						Predictor Variables										
		AIP	PIP	AIT	PIT	LPI	SA	FSS	FNS	PAL	PSI	CI	HS	SES	FM	AC	CS	RA
Hispanic Cross-site ECIP	1	3.1	3.9	2.8	3.6	6	13	45	101	19	330	36	3	18	3	0.8	2	35.3
	2	4.3	4.7	3.0	3.9	3	25	46	160	25	308	36	0	11	2	0.5	2	22.0
	3	3.6	4.6	2.8	3.8	6	17	32	53	20	312	36	15	24	9	1.0	2	25.8
	4	4.3	4.7	3.3	3.9	6	14	55	44	29	352	24	2	27	2	0.5	0	29.7
	5	3.6	3.3	2.9	3.4	3	10	22	83	18	312	36	0	19	1	2.0	3	19.3
	6	3.0	3.6	2.6	3.7	2	19	23	28	15	326	41	0	5	1	1.8	*	44.2
	7	2.6	3.5	3.3	3.4	6	17	42	84	30	327	36	7	18	1	1.3	1	37.8
	8	2.5	4.6	1.7	3.3	0	0	16	77	18	285	19	0	9	5	1.0	1	21.6
	9	2.7	4.6	3.2	3.4	6	*	29	34	18	387	38	11	38	2	0.3	1	28.0
	10	4.2	4.7	3.3	3.7	6	5	24	78	19	324	44	11	13	1	2.0	3	22.3
La Roque ECIP	11	1.9	4.6	2.4	3.7	3	81	32	128	14	236	40	50	21	1	1.3	3	49.3
	12	3.4	4.6	1.5	3.7	0	18	41	90	16	272	42	10	24	4	0.5	1	25.5
	13	4.0	4.7	3.0	5.0	3	43	21	88	20	238	18	7	18	11	1.5	2	32.0
	14	2.6	3.3	4.3	4.7	5	4	21	91	18	278	40	9	3	2	0.2	1	24.2
	15	3.3	4.7	3.9	4.4	5	29	27	71	21	275	38	16	9	5	0.3	2	26.6
	16	3.8	4.8	3.2	4.1	5	4	30	31	16	282	39	7	26	3	3.0	1	41.6
	17	3.8	4.6	3.9	5.0	6	36	55	55	20	299	27	9	33	2	0.6	2	34.6
	18	2.7	3.6	4.0	5.0	6	4	17	38	16	293	27	0	21	1	1.0	3	17.5
	19	3.0	3.6	3.3	3.9	6	41	31	24	13	316	31	2	16	2	0.7	1	25.8
	20	3.9	5.0	3.4	4.4	5	24	21	50	24	284	34	3	39	2	0.5	1	26.5

* Missing Data Point

Key For Abbreviations:

AIP - Actual Involvement-Parent
PIP - Preferred Involvement-Parent
AIT - Actual Involvement-Teacher
PIT - Preferred Involvement-Teacher
LPI - Levels of Parental Involvement
SA - Sessions Attended

FSS - Family Support Scale
FNS - Family Needs Scale
PAL - Personal Allocation Scale
PSI - Parenting Stress Index
CI - Cultural Identity Scale
HS - Health Status Scale

SES - Socioeconomic Status
FM - Family Mobility
AC - Adult to Child ratio
CS - Child Severity
RA - Respondant Age

Table 2
Descriptive Statistics for Criterion and Predictor Variables

Variable		Median	Mean	Std. Dev.	Count
Criterion	AIP	3.35	3.32	0.68	20
	PIP	4.60	4.29	0.58	20
	AIT	3.20	3.09	0.70	20
	PIT	3.85	4.00	0.56	20
	LPI	5.00	4.40	2.01	20
	SA	17.00	21.26	19.21	19
Predictor	FSS	29.50	31.50	11.98	20
	FNS	74.00	70.40	35.08	20
	PAL	18.50	19.45	4.55	20
	PSI	303.50	301.80	35.83	20
	CI	36.00	34.10	7.43	20
	HS	7.00	8.10	11.11	20
	SES	18.50	19.60	9.96	20
	FM	2.00	3.00	2.71	20
	AC	0.90	1.04	0.72	20
	CS	2.00	1.68	0.89	19
	RA	26.55	29.48	8.58	20

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APPENDIX A

ACTUAL AND PREFERRED INVOLVEMENT-PARENTAL VIEW

Actual and Preferred Involvement
(Parental View)

Code #_____ Date_____

This scale asks questions relating to actual involvement (1st line) and preferred involvement (2nd line). Think about how much you have been involved in your child's early intervention program. First, circle the answer which best describes how involved you are with your child's program. Next, on line two, indicate how much you would prefer to be involved in your child's ECIP program.

The Scale:

A:Always	O:Often	ST:Sometimes	S:Seldom	N:Never
Always=100%	Often=75%	Sometimes=50%	Seldom=25%	Never=0%

NA=Not Applicable

Example:

Do you observe your child's home		actual	A	0	ST	S	N
teaching lessons?	NA	preferred	A	0	ST	S	N

The circled answer on the first line indicates that you in actual fact seldom observe your child's home teaching lesson. The circled answer from the second line indicates that you would like to observe more often.

If you wish to add comments about your answers, please use the space provided under each question.

There are many ways in which you can be involved in your child's ECIP program. Please rate your participation for each of the following questions.

1.	Do you read information and		actual	A	0	ST	S	N
	notices that are sent home?	NA	preferred	A	0	ST	S	N
2.	Do you help with fund raising		actual	A	0	ST	S	N
	activities?	NA	preferred	A	0	ST	S	N
3.	Do you attend parent meetings		actual	A	0	ST	S	N
	offered by your ECIP?	NA	preferred	A	0	ST	S	N
4.	Do you attend ECIP meetings when		actual	A	0	ST	S	N
	your child's progress is being	NA	preferred	A	0	ST	S	N
	reviewed?							

5.	Do you attend ECIP board meetings open to the public?		actual	A	0	ST	S	N
		NA	preferred	A	0	ST	S	N
6.	Do you observe your child's home teaching lessons?		actual	A	0	ST	S	N
		NA	preferred	A	0	ST	S	N
7.	Do you provide information or materials that are requested?		actual	A	0	ST	S	N
		NA	preferred	A	0	ST	S	N
8.	Do you help your child with homework?		actual	A	0	ST	S	N
		NA	preferred	A	0	ST	S	N
9.	Do you go on arranged ECIP outings?		actual	A	0	ST	S	N
		NA	preferred	A	0	ST	S	N
10.	Do you help make teaching materials for your child?		actual	A	0	ST	S	N
		NA	preferred	A	0	ST	S	N
11.	Do you help supervise children during group activities?		actual	A	0	ST	S	N
		NA	preferred	A	0	ST	S	N
12.	Do you volunteer your time or skills to help run the ECIP program?		actual	A	0	ST	S	N
		NA	preferred	A	0	ST	S	N
13.	Do you offer ideas and suggestions to be used during home teaching?		actual	A	0	ST	S	N
		NA	preferred	A	0	ST	S	N
14.	Do you attend workshops especially for parents?		actual	A	0	ST	S	N
		NA	preferred	A	0	ST	S	N
15.	Do you attend ECIP related out of town appointments?		actual	A	0	ST	S	N
		NA	preferred	A	0	ST	S	N

APPENDIX B

ACTUAL AND PREFERRED INVOLVEMENT-HOME TEACHER'S VIEW

Actual and Preferred Involvement
(Home teacher's view)

Code #_____ Date_____

This scale asks questions relating to actual involvement (1st line) and preferred involvement (2nd line). Think about how much this parent has been involved in their child's early intervention program, First, circle the answer which best describes how involved this parent is with their child's program. Next, on line two, indicate how much you would prefer this parent to be involved in their child's ECIP program.

The Scale:

A:Always	O:Often	ST:Sometimes	S:Seldom	N:Never
Always=100%	Often=75%	Sometimes=50%	Seldom=25%	Never=0%

NA=Not Applicable

Example:

Does the parent observe their		actual	A	0	ST	S	N
child's home teaching lessons?	NA	preferred	A	0	ST	S	N

The circled answer on the first line indicates that this parent in actual fact seldom observes their child's home teaching lesson. The circled answer from the second line indicates that you would like this parent to observe more often.

If you wish to add comments about your answers, please use the space provided under each question.

There are many ways in which parents can be involved in their child's ECIP program. Please rate this parent's participation for each of the following questions:

1.	Does the parent read information		actual	A	0	ST	S	N
	and notices that are sent home?	NA	preferred	A	0	ST	S	N
2.	Does the parent help with fund		actual	A	0	ST	S	N
	raising activities?	NA	preferred	A	0	ST	S	N
3.	Does the parent attend parent		actual	A	0	ST	S	N
	meetings offered by your ECIP?	NA	preferred	A	0	ST	S	N
4.	Does the parent attend ECIP		actual	A	0	ST	S	N
	meetings when their child's	NA	preferred	A	0	ST	S	N
	progress is being reviewed?							

5.	Does the parent attend ECIP board meetings open to the public?	NA	actual preferred	A A	0 0	ST ST	S S	N N
6.	Does the parent observe their child's home teaching lessons?	NA	actual preferred	A A	0 0	ST ST	S S	N N
7.	Does the parent provide information or materials that are requested?	NA	actual preferred	A A	0 0	ST ST	S S	N N
8.	Does the parent-help their child with homework?	NA	actual preferred	A A	0 0	ST ST	S S	N N
9.	Does the parent go on arranged ECIP outings?	NA	actual preferred	A A	0 0	ST ST	S S	N N
10.	Does the parent help make teaching materials for their child?	NA	actual preferred	A A	0 0	ST ST	S S	N N
11.	Does the parent help supervise children during group activities?	NA	actual preferred	A A	0 0	ST ST	S S	N N
12.	Does the parent volunteer their time or skills to help run the ECIP program?	NA	actual preferred	A A	0 0	ST ST	S S	N N
13.	Does the parent offer ideas and suggestions to be used during home teaching?	NA	actual preferred	A A	0 0	ST ST	S S	N N
14.	Does the parent attend workshops especially for parents?	NA	actual preferred	A A	0 0	ST ST	S S	N N
15.	Does the parent attend ECIP related out of town appointments?	NA	actual preferred	A A	0 0	ST ST	S S	N N

Adapted from: Highett, J. F. (1988). Parent involvement in early childhood education. Unpublished master's thesis, University of Alberta, Edmonton.

APPENDIX C

LEVELS OF PARENTAL INVOLVEMENT

LEVELS OF PARENTAL INVOLVEMENT

Code #_____ _____ Date_____

NON-INVOLVEMENT (NI)-Parents appear uncertain whether or not their child should participate in the early intervention program. They do not express interest in any aspect of the program and frequently do not show for scheduled appointments.

PASSIVE RECEPTIVITY (PR)-Parents consent to allow their child to participate in the early intervention program. These parents make their child available for scheduled home sessions and cancel appointments when appropriate but do not observe or become directly involved in the program.

MINIMAL INVOLVEMENT (MI)-The parent observes home visits and attends professional meetings concerning their child's program alternatives and/or progress.

TRAINING PROGRAM PARTICIPANT (TPP)-The parent observes and participates in the home visit intervention program (i.e. attempts suggested activities during the visit and assigned home programs).

ACTIVE PLANNING TEAM MEMBER (APM)-This type of involvement is characterized by the parents and the home teacher working closely to select program goals, teaching selected skills, and evaluating program effectiveness.

Please rate the identified parent's type of involvement on the following scale using the above definitions. Circle the number on the scale that best describes the parent's level of involvement: (note-if the parent demonstrates some characteristics of two types of involvement please circle the number which falls between the two types of involvement)

```
NI          PR          MI          TPP          APM
|-----|-----|-----|-----|-----|-----|-----|-----|
0     1     2     3     4     5     6     7     8
```

Least involved ----------> most involved

APPENDIX D

FAMILY SUPPORT SCALE

Pages 82 & 83 have been removed due
copyright restrictions.

Source: Dunst, C. J., Trivette, C., & Cross, A. H. (1988). Enabling and empowering families: Principles and guidelines for practice. Cambridge: Brookline Book Inc.

APPENDIX E
FAMILY NEEDS SCALE

Pages 85-87 have been removed due
copyright restrictions.

Source: Dunst, C. J., Trivette, C., & Cross, A. H. (1988). Enabling and empowering families: Principles and guidelines for practice. Cambridge: Brookline Book Inc.

APPENDIX F
PERSONAL ALLOCATION SCALE

Page 89 has been removed due
copyright restrictions.

Source: Dunst, C.J. (1986). Measuring parental commitment to professionally described child-level interventions. Morganton, NC: Family, infant and preschool program.

APPENDIX G
PARENTING STRESS INDEX

Pages 91-95 have been removed due
copyright restrictions.

Source: Abidin, R. R. (1983). Parenting Stress Index-Form 6. Charlottesville, VA: Pediatric Psychology Press.

APPENDIX H

CULTURAL IDENTITY SCALE

CULTURAL IDENTITY

Code #_____ Date_____

The following are a list of questions about facts which people use to explain Native culture. Choose which answer best describes how you feel about the following cultural characteristics.

Note: All questions will use the following scale:

1=not important 2=a little important 3=important
4=very important 5=most important

1. Language

   a) How important is it for you to speak your Native language in your home?

1 2 3 4 5
|----------|----------|----------|----------|
not important most important

   b) How important do you feel it is for your children to learn to speak Cree?

1 2 3 4 5
|----------|----------|----------|----------|
not important most important

2. Lifestyle

   a) How important are traditional types of work (e.g. trapping, fishing, hunting etc.) to your standard of living?

1 2 3 4 5
|----------|----------|----------|----------|
not important most important

b) How important do you feel it is for your children to learn traditional types of work?

1 2 3 4 5
|----------|----------|----------|----------|
not important most important

3. Religious and Ceremonial Beliefs

a) How important is it for you to become involved in Native religious or nonreligious ceremonies or events when they are offered?

1 2 3 4 5
|----------|----------|----------|----------|
not important most important

b) How important do you feel it is for your children to learn about Native ceremonies and beliefs?

1 2 3 4 5
|----------|----------|----------|----------|
not important most important

4. Arts and Crafts

a) How important is it for you to be able to perform or make any Native arts and/or crafts (e.g. beadwork, dance etc.)?

1 2 3 4 5
|----------|----------|----------|----------|
not important most important

b) How important do you feel it is for your children to learn about Native arts and crafts?

1 2 3 4 5
|----------|----------|----------|----------|
not important most important

5. Foods

a) How important is it for you to cook and serve traditional Native dishes (e.g. bannock, wild game etc.)?

1 2 3 4 5
|----------|----------|----------|----------|
not important most important

b) How important do you feel it is for your children to eat and learn about Native dishes?

1 2 3 4 5
|----------|----------|----------|----------|
not important most important

Total score _____

APPENDIX I

HEALTH STATUS QUESTIONNAIRE

HEALTH STATUS

Code #_____ Date_____

Chronic health problems may affect the amount of time and energy you have to be involved in early intervention-program activities.

I Do You or does anyone You care for have any of the following health problems:

A) Chronic diseases such as: allergies, arthritis, asthma, diabetes, bronchitis, high blood pressure, heart disease, kidney disease, stomach ulcers, tuberculosis, etc. (circle identified diseases and list any additional diseases noted)

_____

_____

How would you rate the severity of the condition which interferes the most with your usual activities?

1 2 3 4 5 6
|----------|----------|----------|----------|----------|
not at all severe very severe

How often does caring for yourself or any of the above people interfere with taking part in ECIP activities?

1=rarely 2=not very often 3=sometimes 4=often 5=very often
6=all the time

1 2 3 4 5 6
|----------|----------|----------|----------|----------|
rarely all the time

B) Substance abuse problems (such as alcohol/drug abuse, gas/glue sniffing, etc.)

YES NO

If Yes:

How would you rate the severity of the substance abuse problem?

1 2 3 4 5 6
|----------|----------|----------|----------|----------|
not at all severe very severe

How often does caring for yourself or any of the above people interfere with taking part in ECIP activities?

1=rarely 2=not very often 3=sometimes 4=often 5=very often
6=all the time

1 2 3 4 5 6
|----------|----------|----------|----------|----------|
rarely all the time

C) Physical problems (such as missing arms or legs, paralysis of any kind, hearing/vision problems etc.)

YES NO

If Yes:

How would you rate the severity of these problems?

1 2 3 4 5 6
|----------|----------|----------|----------|----------|
not at all severe very severe

How often does caring for yourself or any of the above people interfere with taking part in ECIP activities?

1=rarely 2=not very often 3=sometimes 4=often 5=very often 6=all the time

1 2 3 4 5 6
|----------|----------|----------|----------|----------|
rarely all the time

D) Emotional/mental health problems (eg. depression)

YES NO

If Yes:

How would you rate the severity of these problems?

1 2 3 4 5 6
|----------|----------|----------|----------|----------|
not at all severe very severe

How often does caring for yourself or any of the above people interfere with taking part in ECIP activities?

1=rarely 2=not very often 3=sometimes 4=often 5=very often 6=all the time

1 2 3 4 5 6
|----------|----------|----------|----------|----------|
not at all severe very severe

Total Score_____

APPENDIX J

SOCIO-ECONOMIC STATUS

SOCIO-ECONOMIC STATUS

Code #_____ Date_____

Socioeconomic Information:

	Respondent	Spouse/partner
Level of education (# of years completed)	_____	_____
Employment status (# of months in past 5 yrs.)	_____	_____
Average income (over past 5 yrs.)	_____	_____
Occupation	_____	_____

APPENDIX K

CHILD SEVERITY STATUS

CHILD SEVERITY STATUS

Code #_____ Date_____

I Identifying Information:

First name _____ D.O.B. _____

sex _____

Status/nonstatus_____ DISC test score _____

Diagnosis _____

_____

_____

Participation in additional activities/services (circle appropriate items);

Home visits	Early entrance	Social services
Respite	Physiotherapy	Public health
Daycare	Speech therapy	Federal health
Parent groups	Occupational therapy	Mental health

Other activities or services the family or child participates in:

_____

_____

II ECIP Information:

Date of initial home visit _____

# of scheduled visits _____ # of visits attended _____

APPENDIX L

HOUSEHOLD COMPOSITION

HOUSEHOLD COMPOSITION

Code #_____ Date_____

Household Information:

Respondent's relationship to child _____

Marital Status _____ D.O.B._____

Place of residence_____

Length of residence: years _____ months _____

Number of different residences in the past 5 years _____

Total number of persons, including the respondent, who normally live in the home, whether they are relatives or not_____

Number of young children, under the age of 12, living in the home (including the identified child) _____

APPENDIX M

RESEARCH CONSENT FORM

RESEARCH CONSENT FORM
(Department of Speech Pathology and Audiology)

Topic of Project: Family Characteristics
Principal Researcher: Krysta Watt Telephone: 425-3115

Description of the Study: This study will try to find ways that the ECIP (Early Childhood Intervention Program) can use to better help Native families and their children. Parents/guardians who take part in the LaRonge and Ile ala Crosse ECIPs will be asked some questions. Some of these questions will be quite personal. Facts from the children's ECIP files will also be used in this study. All facts about these families will be kept secret. Questions will be asked about:

1) How often the family needs different types of help?
2) How helpful are friends, family and groups?
3) How much time, energy and belief do they have to try ECIP activities?
4) How important is it for the family to know about Native customs and beliefs?
5) What health problems the family has?
6) How involved are they in the ECIP?
7) How involved would they like to be?
8) How much schooling and income the family has?
9) How many people live in the home?
10) How old the people are who live in the home?

These questions are asked because they may limit the involvement of these families in the ECIP. Finding out these facts may help the ECIP learn how to better help these families. Families who are involved in this study will be paid $10.00.

Name _____ Date _____

Being involved in this study means:

a) I will be asked questions by Krysta Watt that will take about 2 hours to answer. This meeting will take place in my home at my convenience.

b) The meeting will involve the following:

   i) I will answer a number of questions about:

      1) How often my family needs different types of help?
      2) How helpful different people and groups are to my family?

2) How helpful different people and groups are to my family?
3) How much time, energy and belief I have to try ECIP activities?
4) What health problems my family has?
5) How important knowing about Native culture is to my family?
6) How involved I am in the ECIP and how involved I would like to be?

ii) I will be asked questions about my family's income, how many people live in my home and how old they are.

c) I will be paid $10.00 for being involved in this study.

I understand that facts from my child's ECIP file will be included as part of this project.

I am free to withdraw from this study and to refuse to answer any questions. Doing so will not change my treatment in the ECIP.

My privacy will be protected in the following manner:

a) All facts obtained about me during the course of this study will be kept secret. A number will be used instead of my name, Only Krysta Watt will know which number goes with my name. Facts about me will not be given to any other person without my written permission.

b) My name will not be used in any reports of this study.

I understand what is needed from me to be part of this study. I understand what I am going to be asked to do (answer questions). I understand how facts about my family will be obtained (by questionnaires and from my child's file). I understand the amount of time this will take (about two hours). I agree to be involved in this study.

Signature of parent/guardian _____

Date _____ Witness _____

APPENDIX N

CORRELATION MATRIX FOR ALL VARIABLES

Correlation Matrix - all variables

Correlation Matrix for Variables: X_1 ... X_{17}

	aip	pip	ait	pit	lpi	sa	fss	fns
aip	1							
pip	.488	1						
ait	.126	-.292	1					
pit	.164	.079	.659	1				
lpi	.162	-.219	.772	.299	1			
sa	-.226	.227	-.099	.127	-.07	1		
fss	.296	.164	-.034	-.127	.224	.187	1	
fns	-.11	.045	-.32	-.266	-.453	.289	.154	1
pal	.394	.15	.198	-.089	.25	-.186	.442	.13
psi	.33	-.263	.173	-.387	.515	-.503	.46	-.24
ci	-.065	-.088	.029	-.306	.12	-.014	.052	.263
hs	-.439	.237	-.153	-.063	-.079	.722	.017	.316
ses	.331	.381	-.034	.177	.202	.181	.319	-.421
fm	.197	.366	-.253	.204	-.233	.085	-.188	-.038
cs	-.11	-.121	.077	.087	.04	.236	-.298	.319
ra	-.256	.224	-.096	-.062	.126	.58	.378	.117

Note: 2 cases deleted with missing values.

Correlation Matrix for Variables: X_1 ... X_{17}

	aip	pip	ait	pit	lpi	sa	fss	fns
ac	.118	.033	-.14	-.228	.008	-.142	-.27	-.157

Correlation Matrix - all variables

Correlation Matrix for Variables: $X_1 \ldots X_{17}$

	pal	psi	ci	hs	ses	fm	cs	ra
pal	1							
psi	.476	1						
ci	-.158	.039	1					
hs	-.289	-.531	.38	1				
ses	.151	.058	-.116	.014	1			
fm	-.037	-.37	-.392	.003	-.055	1		
cs	-.382	-.225	.221	.347	-.134	-.074	1	
ra	4.226E-4	-.279	.137	.64	.297	-.022	-.081	1

Correlation Matrix for Variables: $X_1 \ldots X_{17}$

	pal	psi	ci	hs	ses	fm	cs	ra
ac	-.236	-.06	.134	.064	.095	-.006	.301	.279